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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,928	03/30/2004	Tomomi Tateishi	1330-0139PUS1	2905
2292	7590	12/08/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			WILSON, CHRISTIAN D	
			ART UNIT	PAPER NUMBER
			2891	

DATE MAILED: 12/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

FL

Office Action Summary	Application No.		Applicant(s)	
	10/811,928		TATEISHI, TOMOMI	
	Examiner		Art Unit	
	Christian Wilson		2891	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03302004</u> . | 6) <input checked="" type="checkbox"/> Other: <u>search history</u> . |

DETAILED ACTION***Information Disclosure Statement***

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper."

Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the method steps of superposing, applying heat or pressure, and peeling must be shown or the features canceled from the claims. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency.

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Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: no units are provided for the measurements of surface roughness or film thickness.

Appropriate correction is required.

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

5. The incorporation of essential material in the specification by reference to an unpublished U.S. application, foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference, if the material is relied upon to overcome any objection, rejection, or other requirement imposed by the Office. The amendment must be accompanied by a statement executed by the applicant, or a practitioner representing the applicant, stating that the material being inserted is the material previously incorporated by reference and that the amendment contains no new matter. 37 CFR 1.57(f). The

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subject matter covered by "JIS B 0601-1982" is considered essential material and may not be incorporated by reference to a foreign document.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1- 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Regarding claims 1, 3, 7, 9, 13, 15, 19, and 21, the phrase "assuming that" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

9. Claims 1 – 24 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: the description of the means for measuring the surface roughness since incorporation by reference to a foreign document is prohibited for essential subject matter.

10. Claims 1 – 24 are rejected as indefinite since no units are provided for the limitations of surface roughness and thickness. For the purposes of examination, it will be assumed that micron (μm) and nanometer (nm) are the appropriate units of length.

Official Notice

11. Official notice is taken that the coefficient of linear thermal expansion for polybutylene terephthalate (PBT) is less than 20 ppm/°C. This fact is taken from Belke *et al.* (US 4,876,120) [column 4].

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1, 2, 4 – 8, 10 – 14, 16 – 20, and 22 – 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki *et al.* in view of Sakumoto *et al.*

Regarding claim 1, Yamazaki *et al.* (US 2003/0134488) teaches a method of producing an organic electroluminescent device [0043] by using a transfer material **121** comprising an organic layer formed on a support **122** by superposing the transfer material on a first substrate **111** having an electrode [0068] such that the organic layer faces the electrode [Figure 1C], applying heat or pressure to form a laminate [0044], and peeling the support to transfer the organic layer to the first substrate [Figure 1D], where the organic layer is 100 nm thick [0063]. Yamazaki *et al.* does not discuss the surface roughness of the first substrate but does state that surfaces must enhance the flatness of the organic layer [0063]. Sakumoto *et al.* (US 5032,438) teaches an attachment method where the transfer material has a surface roughness of not more than 2.5 μm [column 2, lines 50-60]. It would have been obvious to one of ordinary skill in the art to provide a

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first substrate with a surface roughness of 0 – 50 μm since Sakumoto *et al.* teaches that this surface roughness prevents the formation of cracks and voids between the bonded materials.

Regarding claim 2, Yamazaki *et al.* further teaches laminating a second substrate **112** with an electrode to the organic layer.

Regarding claim 4, Yamazaki *et al.* further teaches a substrate formed of PBT [0016].

Regarding claims 5 and 6, Yamazaki *et al.* further teaches forming a flat layer **322** of a UV curing organic compound [0070].

Regarding claim 7, Yamazaki *et al.* teaches a method of producing an organic electroluminescent device [0043] by using a transfer material **121** comprising an organic layer formed on a plate **122** having a pattern by superposing the transfer material on a first substrate **111** having an electrode [0068] such that the organic layer faces the electrode [Figure 1C], applying heat or pressure to form a laminate [0044], and peeling the support to transfer the organic layer to the first substrate [Figure 1D], where the organic layer is 100 nm thick [0063]. Yamazaki *et al.* does not discuss the surface roughness of the first substrate but does state that surfaces must enhance the flatness of the organic layer [0063]. Sakumoto *et al.* teaches an attachment method where the transfer material has a surface roughness of not more than 2.5 μm [column 2, lines 50-60]. It would have been obvious to one of ordinary skill in the art to provide a first substrate with a surface roughness of 0 – 50 μm since Sakumoto *et al.* teaches that this surface roughness prevents the formation of cracks and voids between the bonded materials.

Regarding claim 8, Yamazaki *et al.* further teaches laminating a second substrate 112 with an electrode to the organic layer.

Regarding claim 10, Yamazaki *et al.* further teaches a substrate formed of PBT [0016].

Regarding claims 11 and 12, Yamazaki *et al.* further teaches forming a flat layer 322 of a UV curing organic compound [0070].

Regarding claims 13 – 24, it is noted that product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Yamazaki *et al.* as modified by Sakumoto *et al.* teaches the structure implied by the steps in claims 13 – 24 as shown in Figure 1E of Yamazaki *et al.* Further, Sakumoto *et al.* teaches an attachment method where the transfer material has a surface roughness of not more than 2.5 μm [column 2, lines 50-60]. It would have been obvious to one of ordinary skill in the art to provide a first substrate with a surface roughness of 0 – 50 μm since Sakumoto *et al.* teaches that this surface roughness prevents the formation of cracks and voids between the bonded materials.

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14. Claims 3, 9, 15, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki *et al.* and Sakumoto *et al.* as applied to claims 2, 8, 14, and 20 above, and further in view of McCormick *et al.*

Yamazaki *et al.* as modified by Sakumoto *et al.* teaches the limitations of claims 2, 8, 14, and 20 as described above, but they do not discuss the surface roughness of the second substrate. McCormick *et al.* (US 2004/0119403) teaches a method of forming an organic electroluminescent device where the second substrate has a surface roughness of less than 100 – 300 nm [0073]. It would have been obvious to one of ordinary skill in the art to use the smooth second substrate of McCormick *et al.* in the method of Yamazaki *et al.* since this provides a layer free of pinholes which would allow moisture or oxygen into the finished device.

Conclusion

15. A copy of the search history is enclosed.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian Wilson whose telephone number is (571) 272-1886. The examiner can normally be reached on weekdays, 7:30 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Baumeister can be reached on (571) 272-1722. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'CW', with a large, stylized loop at the end.

Christian Wilson, Ph.D.
Primary Examiner
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CDW